

We claim:

1. A substantially purified nucleic acid molecule that encodes a lily protein or fragment thereof comprising a nucleic acid sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO: 6041.

2. A substantially purified lily protein or fragment thereof, wherein said lily protein is encoded by a nucleic acid molecule that comprises a nucleic acid sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO: 6041.

3. A transformed plant having a nucleic acid molecule which comprises:

- (a) an exogenous promoter region which functions in a plant cell to cause the production of a mRNA molecule;
- (b) a structural nucleic acid molecule comprising a nucleic acid sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO: 6041 or complements thereof;
- (c) a 3' non-translated sequence that functions in said plant cell to cause termination of transcription and addition of polyadenylated ribonucleotides to a 3' end of said mRNA molecule.

4. The transformed plant according to claim 3, wherein said structural nucleic acid molecule is a complement of any of the nucleic acid sequences of SEQ ID NO: 1 through SEQ ID NO: 6041.

5. The transformed plant according to claim 4, wherein said plant is cotton, wheat, lily, soybean or maize.

6. The transformed plant according to claim 4, wherein said plant is maize.

7. The transformed plant according to claim 4, wherein said plant is soybean.

8. The transformed plant according to claim 4, wherein said plant is lily.